



*CofC*

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : US 7,233,556 B2                      Issue Date : Jun. 19, 2007  
Serial No. : 10/711,212                      Filing Date : Sep. 01, 2004  
Inventor : Yu-Hung Sun  
Docket No. : LITP0043USA

Title: DISK DISCRIMINATION METHOD

**Certificate**

**JUL 31 2007**

**of Correction**

To: Commissioner for Patents  
P.O. BOX 1450  
Alexandria, VA 22313-1450

Subject: Request for Certificate of Correction of Office Mistake

Dear Sir:

The above-identified patent was issued on 06/19/2007. The applicant found that the residence of the Assignee is incorrect on the front page of the patent (Attachment 1). Documents on record indicate this as an Office mistake of consequence.

The applicant hereby requests that a Certificate of Correction be issued under 37 CFR 1.322 to correct the residence of the Assignee from "Nelhu" to "Neihu" as correctly listed on the Fee Transmittal submitted on 05/15/2007 (Attachment 2) and Notice of Recordation of Assignment Document dated Sep. 02, 2004 (Attachment 3).

**AUG 3 2007**

Respectfully submitted,

Winston Hsu

Date: JUL 26 2007

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

AUG 3 2007

Please correct the  
residence of assignee  
from "Nelhu" to "Neihu"



US007233556B2

(12) **United States Patent**  
**Sun**

(10) **Patent No.:** **US 7,233,556 B2**  
(45) **Date of Patent:** **Jun. 19, 2007**

(54) **DISK DISCRIMINATION METHOD**

(56) **References Cited**

(75) Inventor: **Yu-Hung Sun, Taipei (TW)**

**U.S. PATENT DOCUMENTS**

(73) Assignee: **Lite-On It Corporation, Nelhu, Taipei (TW)**

6,327,234	B1 *	12/2001	Kamiyama et al. ....	369/53.23
6,487,153	B2 *	11/2002	Kamiyama et al. ....	369/53.23
6,747,931	B1 *	6/2004	Park .....	369/53.23
6,879,555	B2 *	4/2005	Takeuchi .....	369/53.23
6,956,801	B2 *	10/2005	Horimoto .....	369/53.2

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 380 days.

\* cited by examiner

(21) Appl. No.: **10/711,212**

*Primary Examiner*—Thang V. Tran

(22) Filed: **Sep. 1, 2004**

(74) *Attorney, Agent, or Firm*—Winston Hsu

(65) **Prior Publication Data**

US 2005/0052977 A1 Mar. 10, 2005

(30) **Foreign Application Priority Data**

Sep. 4, 2003 (TW) ..... 92124517 A

(51) Int. Cl. **G11B 7/00** (2006.01)

(52) U.S. Cl. .... 369/53.23

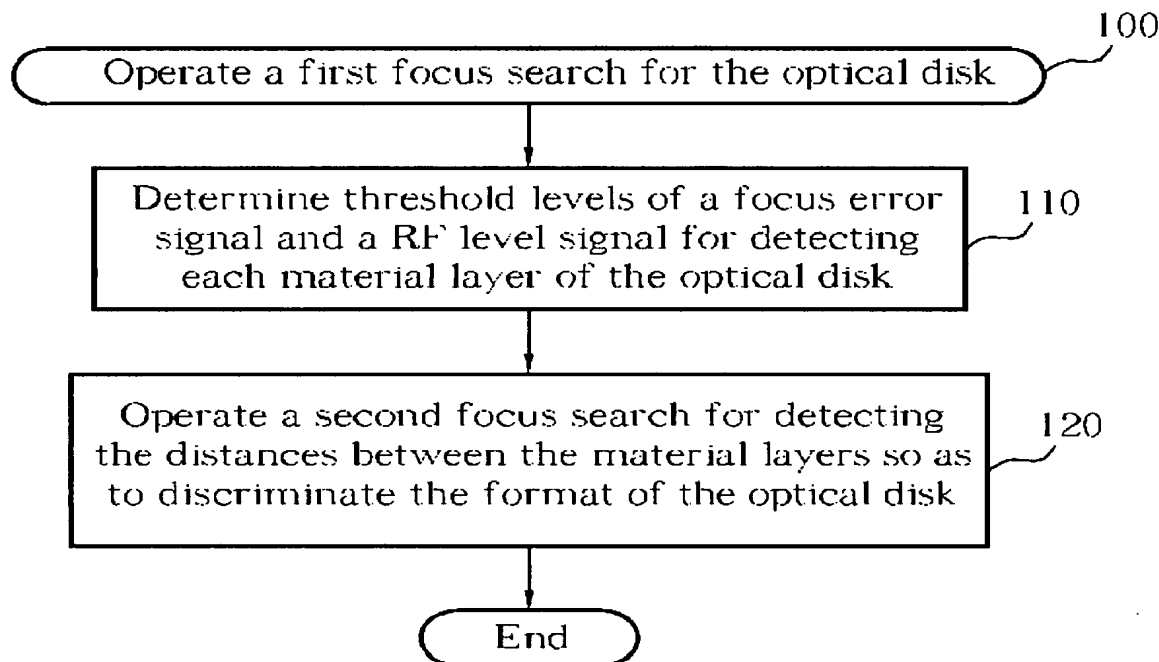
(58) Field of Classification Search ..... 369/53.2, 369/53.23, 44.27, 44.25, 44.26, 94

See application file for complete search history.

(57) **ABSTRACT**

A method for discriminating an optical disk is disclosed. Peak values and trough values of focus error signal and RF level signal are detected by an operation of focus search. Threshold levels for detecting each material layer of the optical disk are determined according to the peak values and the trough values. Thereafter another focus search for the optical disk is executed to calculate a thickness of the substrate and a distance between the first and the second recording layer of the optical disk according to the threshold levels. Thus the type of the optical disk can be discriminated.

**25 Claims, 5 Drawing Sheets**



**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
or **Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the **ISSUE FEE** and **PUBLICATION FEE** (if required). Blocks 1 through 3 should be completed where appropriate. All other correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.


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27765 7590 03/12/2007  
NORTH AMERICA INTELLECTUAL PROPERTY  
CORPORATION  
P.O. BOX 508  
HENDERSON, NV 89003-0508  
05/15/2007 10600950 503105 10711212  
01 FC:1501 1400.00 DA  
02 FC:1504 300.00 DA

Brenda Lin	(Depositor's name)
	(Signature)
06/15/2007	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,212	09/01/2004	Yu-Hung Sun	LITP0043USA	5211
TITLE OF INVENTION: DISK DISCRIMINATION METHOD				

APPL. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PRIV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0	\$1700	06/12/2007
EXAMINER	ART UNIT	CLASS-SUBCLASS				

TRAN, THANG V		2627	369-053230
1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.163). <input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. <input type="checkbox"/> "Fee Address" indication (or "Fee Address" indication form PTO/SB/47; Rev 01-02 or more recent) attached. Use of a Customer Number is required.		2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.	
		1.	Winston Hsu
		2.	
		3.	

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recording as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

**LITE-ON IT CORPORATION**

15F, 392, Ruey Kuang Road, **Neihu**, Taipei City, Taiwan, R.O.C.

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fec(s) are submitted:

- ☒ Issue Fee  
☒ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

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☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit/ Account Number 60-3105 (enclose an extra copy of this form).

**5. Change to Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

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Authorized Signature W. L. Anderson

Date 05/15/2007

Typed or printed name Winston Hsu

Registration No. 41,526

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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AUG 3 2007

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Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231



SEPTEMBER 02, 2004

PTAS

\*800013520A\*

NAIPO (NORTH AMERICA INTERNATIONAL PATEN  
P.O. BOX 506  
MERRIFIELD, VA 22116

Cindy 9.13.2004

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/01/2004

REEL/FRAME: 015066/0467  
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).  
DOCKET NUMBER: LITP0043USA

ASSIGNOR:  
SUN, YU-HUNG

DOC DATE: 08/16/2004

ASSIGNEE:  
LITE-ON IT CORPORATION  
15F, 392, RUEY KUANG ROAD, NEIHU  
TAIPEI CITY, TAIWAN

SERIAL NUMBER: 10711212  
PATENT NUMBER:  
TITLE: DISK DISCRIMINATION METHOD

FILING DATE:  
ISSUE DATE:

AUG 3 2007

015066/0467 PAGE 2

ALLYSON PURNELL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AUG 8 2007

PATENT ASSIGNMENT

Electronic Version v08  
Stylesheet Version v02

09/01/2004  
800013520

SUBMISSION TYPE:	NEW ASSIGNMENT	<b>APPLICATION NUMBER</b> 10711212			
NATURE OF CONVEYANCE:	ASSIGNMENT OF ASSIGNOR'S INTEREST				
CONVEYING PARTY DATA					
Name		Execution Date			
Yu-Hung Sun		2004-08-16			
RECEIVING PARTY DATA					
Name	Street Address	Internal Address	City	State/Country	Postal Code
LITE-ON IT CORPORATION	15F, 392, Ruey Kuang Road, Neihu		Taipei City	TAIWAN	
CORRESPONDENCE DATA					
FAX NUMBER: 886229295950 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> When the customer number has been provided, the Office of Public Records will obtain the correspondence data from the official record on file at the USPTO. CUSTOMER NUMBER: 027765					
NAME OF PERSON SIGNING:		WINSTON HSU			
DATE SIGNED:		2004-08-31			
Total Attachments: 1 source=LITP0043-0-A1ASS1.tif					

CH \$40.00 503105 10711212

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PTO/SB/21 (04-07)

Approved for use through 09/30/2007. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

10

Application Number

10/711,212

Filing Date

09/01/2004

First Named Inventor

Yu-Hung Sun

Art Unit

2627

Examiner Name

TRAN, THANG V

Attorney Docket Number

LITP0043USA

**ENCLOSURES (Check all that apply)**

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Reply to Missing Parts/  
Incomplete ApplicationReply to Missing Parts  
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a  
Provisional Application

Power of Attorney, Revocation



Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) \_\_\_\_\_



Landscape Table on CD



After Allowance Communication to TC

Appeal Communication to Board  
of Appeals and InterferencesAppeal Communication to TC  
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosure(s) (please identify  
below):

1. A copy of the Front Page of Patent.
2. A copy of Fee Transmittal submitted on 05/15/2007
3. Copies of the Notice of Recordation dated  
09/02/2004
4. PTO/SB/44

**Remarks**

Request for Certificate of Correction of Office Mistake

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name

North America Intellectual Property Corporation

Signature

*Winston Hsu*

Printed name

Winston Hsu

Date

JUL 26 2007

Reg. No.

41,526

**CERTIFICATE OF TRANSMISSION/MAILING**

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*Josefina Wang*

Typed or printed name

Josefina Wang

Date

JUL 26 2007

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PTO/SB/17 (05-07)  
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Effective on 12/08/2004.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

## FEE TRANSMITTAL For FY 2007

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0.00

### Complete if Known

Application Number	10/711,212
Filing Date	09/01/2004
First Named Inventor	Yu-Hung Sun
Examiner Name	TRAN, THANG V
Art Unit	2627
Attorney Docket No.	LITP0043USA

### METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_

☒ Deposit Account Deposit Account Number: 50-3105 Deposit Account Name: North America Intellectual Property Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

#### 2. EXCESS CLAIM FEES

##### Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 20 or HP =	x	=	

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 3 or HP =	x	=	

HP = highest number of independent claims paid for, if greater than 3.

Fee (\$)	Small Entity Fee (\$)
50	25
200	100
360	180

Multiple Dependent Claims	
Fee (\$)	Fee Paid (\$)

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Request for Certificate of Correction

Fees Paid (\$)

0

### SUBMITTED BY

Signature	<i>Winston Hsu</i>	Registration No. (Attorney/Agent) 41,526	Telephone 3027291562
Name (Print/Type)	Winston Hsu	Date	JUL 26 2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 7,233,556 B2

APPLICATION NO.: 10/711212

ISSUE DATE : Jun. 19, 2007

INVENTOR(S) : Yu-Hung Sun

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page, Item (73), Assignee,

the residence should be corrected from "Nelhu" to --Neihu --

MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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